

STATE UNIVERSITY OF NEW YORK
COLLEGE OF TECHNOLOGY
CANTON, NY

COURSE OUTLINE
ACHP 181- Introduction to Environmental Technology

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CANINO SCHOOL OF ENGINEERING TECHNOLOGY
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ACHP181- Introduction to Environmental Technology

- A. Title: Introduction to Environmental Technology
- B. Course Number: ACHP181
- C. Credit Hours: 3
- D. Writing Intensive Course: No
- E. Course Length: 15 weeks per semester
- F. Semester Offered: Spring Semester
- G. Hours of Lecture, Laboratory, Recitation, Tutorial, Activity: (3) hours lecture per week.
- H. Catalog Description: This course provides the student without a technical background an opportunity to explore the broad field of Environmental Technology. This includes basic problem solving as applied to situations occurring in everyday living environments. Current issues such as indoor air quality, CFC's, Radon and Legionnaire's Disease are discussed and solutions presented through proper design. Each student will be introduced to the various phases of building construction and maintenance so he/she will be able to make rational decisions with regard to building environmental conditions.
- I. Pre-Requisites/Co-Courses: None
- J. Goals (Student Learning Outcomes): By the end of this course, the student will have:
1. A broadened knowledge of environmental systems and basic problem solving skills in this area.
- K. Texts: TBA
- L. References: To be supplied by the Instructor.
- M. Equipment: Various lab equipment will be used in multiple labs to introduce students to the CSOET curricula.
- N. Grading: A-F
- O. Measurement Criteria/Methods: Exams, Labs and Student Projects.
- P. Detailed Topical Outline: See attached.
- Q. Laboratory Outline: See attached.

DETAILED OUTLINE
ACHP181- INTRODUCTION TO ENVIRONMENTAL TECHNOLOGY

TOPICS

- I. Environmental Problems and Their Impact on Living
 - A. Conditions
 - B. Acid rain
 - C. Air pollution
 - D. Ozone depletion
 - E. Radon
 - F. Legionella
 - G. Greenhouse effect
 - H. Other natural occurring phenomena

- II. Construction Approaches to Minimize Impact of Environmental Problems

- III. Floor Plans
 - A. Residential buildings
 - B. Commercial properties
 - C. Institutional Facilities

- III. Types of Building Construction
 - A. Frame
 - B. Steel
 - C. Masonry and Reinforced Concrete
 - D. Earth Sheltered

- IV. Solar Considerations
 - A. Window types
 - B. Orientation
 - C. Location

- V. Insulation Products
 - A. Fiberglass
 - B. Foams
 - C. Boards
 - D. Fire and toxic properties of building material

- VI. Heating Systems
 - A. Gas
 - B. Fuel Oil
 - C. Electric
 - D. Heat pumps
 - E. Warm air
 - F. Water

- VII. Indoor Air Quality
 - A. Ventilation
 - B. Infiltration/Exfiltration

- VIII. Case Study of Construction Process
 - A. Owner concept
 - B. Architect
 - C. Engineers
 - D. Technicians
 - E. Contractors
 - F. Suppliers
 - G. Inspectors
 - H. Building Codes- State and Local

LABORATORY OUTLINE

Note: Labs will follow standard procedures in multiple CSOET curricula as students are introduced to the variety of opportunities offered in technology. Time will be spent in the ACET, CET, EET and MET curricular lab settings. Further labs will feature “hands on” work within the one-year curricula.